

BOF Threatened or Impaired Watersheds Rule Review

Draft Regulatory Proposal

Group 1 (Goal/Intent and Definitions sections)

Group 3 (Cumulative Impacts sections)

**14 CCR §§ 895; 898; 916[936, 956]; 916.1 [936.1, 956.1]; 916.2 [936.2, 956.2]; 916.9
(a) and (b) [936.9 (a) and (b), 956.9 (a) and (b)]; 916.12 [936.12, 956.12]**

July 31, 2008

1 **§ 895.1. Definitions.**

2 **Channel zone** means that area ~~that includes a watercourse's channel at bankfull stage~~
3 ~~and a watercourse's floodplain, encompassing the area located between the watercourse~~
4 ~~transition lines.~~¹
5

6 **Riparian-Associated Species** means those species that depend on the riparian areas
7 during at least one critical life stage.²
8

9 **Saturated soil conditions** means that site conditions are ~~sufficiently wet that timber~~
10 ~~operations displace soils in yarding or mechanical site preparation areas or displace road and~~
11 ~~landing surface materials in amounts sufficient to cause a turbidity increase in drainage facilities~~
12 ~~that discharge into Class I, II, III, or IV waters, or in downstream Class I, II, III, or IV waters that~~
13 ~~is visible or would violate applicable water quality requirements.~~
14

15 In yarding and site preparation areas, this condition may be evidenced by: a) ~~reduced~~
16 ~~traction by equipment as indicated by spinning or churning of wheels or tracks in excess of~~
17 ~~normal performance, b) inadequate traction without blading wet soil, c) soil displacement in~~
18 ~~amounts that cause visible increase in turbidity of the downstream waters in a receiving Class I,~~
19 ~~II, III, or IV waters, or in amounts sufficient to cause a turbidity increase in drainage facilities that~~
20
21

22
23 ¹ **Channel zone:** Modified to improve clarity.

24 ² **Riparian Associated Species:** Provides definition for those species dependent upon riparian
25 areas. This term is used in current regulations, and no definition is provided. The term is
needed for specificity on which beneficial uses of water are intended to be protected.

1 discharge into Class I, II, III, or IV waters, or d) creation of ruts greater than would be normal
2 following a light rainfall.

3 On logging roads and landing surfaces, this condition may be evidenced by a) reduced
4 traction by
5 equipment as indicated by spinning or churning of wheels or tracks in excess of normal
6 performance, b) inadequate traction without blading wet soil, c) soil displacement in amounts
7 that cause visible increase in turbidity of the downstream waters in receiving Class I, II, III, or IV
8 waters, or in amounts sufficient to cause a turbidity increase in drainage facilities that discharge
9 into Class I, II, III, or IV waters, d) pumping of road surface materials by traffic, or e) creation of
10 ruts greater than would be created by traffic following normal road watering, which transports
11 surface material to a drainage facility that discharges directly into a watercourse. The

12 Soils or road and landing surfaces that are hard frozen are excluded from this definition.
13 so wet that soil aggregates break down and the surface layer of soil becomes a slurry (may
14 include the pumping of fine from poorly or inadequately rocked roads) as a result of ground
15 based yarding/loading, site preparation, hauling or road maintenance. Such conditions are
16 often evidenced by: reduced traction by equipment as indicated by spinning or churning of
17 wheels or tracks or inadequate traction without blading wet soil or material.

18 Soils or road and landing surfaces that are hard frozen, throughout the period of heavy
19 equipment use, are excluded from this definition.³

20
21
22
23
24 ³ **Saturated roads:** Separates characteristics of from description of resultant
25 impacts. Modification made to clarify when the road itself is in an unacceptable condition.
Deletes reference to ancillary undesirable impacts to water quality; these should be inserted
into the specific rule requirements. Consider moving deleted portions to prescriptive
requirements in 916.9 Or 923.9

1 **Stable operating surface** means that throughout the period of use, the operating
2 ~~surface of a logging road or landing does not either (1) generate waterborne sediment in~~
3 ~~amounts sufficient to cause a turbidity increase in downstream Class I, II, III, or IV waters, or in~~
4 ~~amounts sufficient to cause a turbidity increase in drainage facilities that discharge into Class I,~~
5 ~~II, III, or IV waters or, that is visible or would violate applicable water quality requirements; or (2)~~
6 ~~channel water for more than 50 feet that is discharged into Class I, II, III, or IV waters.~~ a road or
7 landing surface with a structurally sound road base appropriate for the type, intensity and timing
8 of intended use⁴.

22 ⁴ **Stable operating surface:** Modification made to clarify when the road itself is in an
23 unacceptable condition. Deletes reference to ancillary undesirable impacts to water quality;
24 these should be inserted into the specific rule requirements. Consider moving deleted portions to
25 prescriptive requirements in 916.9 Or 923.9

Watercourse or Lake Transition Line [Optional Amendment 1]

~~(a) for a watercourse with an unconfined channel (a channel with a valley to width ratio at bankfull stage of 4 or greater) means that line defined by the landward margin of the most active portion of the channel zone area readily identified in the field by riverine hardwood and conifer trees at least twenty five years in age at breast height.~~

~~(b) for a watercourse with a confined channel means that line that is the outer boundary of a watercourse's 20-year return interval flood event floodplain. The outer boundary corresponds to an elevation equivalent to twice the maximum depth of the adjacent riffle at bankfull stage. The bankfull stage elevation shall be determined by field indicators and may be verified by drainage area/bankfull discharge relationships.~~

The watercourse transition line is the outer boundary of a watercourse's 20-year return interval flood event floodplain as defined by the following: (1) the upper limit of sand and/or silt deposition such as mudlines on trees; and, (2) evidence of recent channel migration and/or flood debris. The first line of permanent woody vegetation must not be used to determine this transition line⁵.

~~(c) For a lake, it is that line closest to the lake where riparian vegetation is permanently established.~~

⁵ Watercourse or Lake Transition Line: Optional suggested amendment pending findings from BOF scientific literature review. Amendment deletes existing definitions and redefines based on interagency riparian flood prone area committee's recommendations (Cafferata et al 2005). Current definitions and it application in the field separates watercourses form their floodplains which is inconsistent with current literature. The new definition also removes reference to "confined and unconfined channels which are confusing and difficult use in the field.

1 **Watersheds with threatened or ~~impaired values~~ endangered anadromous**
2 **salmonids** means any planning watershed where populations of anadromous salmonids that
3 are listed as Threatened, endangered, or candidate under the State or Federal Endangered
4 Species Acts with their implementing regulations, are currently present or can be restored.⁶
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23

24 ⁶ **Watersheds with threatened or ~~impaired values~~ endangered anadromous salmonids:** Clarifies scope
25 of intent. This change is more in line with the actual application of the T/I rules. Threatened
and Impaired is not descriptive of the intent of the regulations as application of the rules do
not meet completely meet 303d "impaired" waterbody legal requirements.

§ 898 Feasibility Alternatives

After considering the rules of the Board and any mitigation measures proposed in the plan, the RPF shall indicate whether the operation would have any significant adverse impact on the environment. On TPZ lands, the harvesting per se of trees shall not be presumed to have a significant adverse impact on the environment. If the RPF indicates that significant adverse impacts will occur, the RPF shall explain in the plan why any alternatives or additional mitigation measures that would significantly reduce the impact are not feasible.

Cumulative impacts shall be assessed based upon the methodology described in Board Technical Rule Addendum Number 2, Forest Practice Cumulative Impacts Assessment Process and shall be guided by standards of practicality and reasonableness. The RPF's and plan submitter's duties under this section shall be limited to closely related past, present and reasonably foreseeable probable future projects within the same ownership and to matters of public record. The Director shall supplement the information provided by the RPF and the plan submitter when necessary to ensure that all relevant information is considered.

~~When assessing cumulative impacts of a proposed project on any portion of a waterbody that is located within or downstream of the proposed timber operation and that is listed as water quality limited under Section 303(d) of the Federal Clean Water Act, the RPF shall assess the degree to which the proposed operations would result in impacts that may combine with existing listed stressors to impair a waterbody's beneficial uses, thereby causing a significant adverse effect on the environment. The plan preparer shall provide feasible mitigation measures to reduce any such impacts from the plan to a level of insignificance, and may provide measures, insofar as feasible, to help attain water quality standards in the listed portion of the waterbody.~~

~~The Director's evaluation of such impacts and mitigation measures will be done in consultation with the appropriate RWQCB.⁷~~

⁷ 898 Section deleted and revised in 916.12 for purposes of consolidating plan requirements for 303 (d)listed water bodies

916, 936, 956 Intent of Watercourse and Lake Protection [All Districts]

The purpose of this article is to ensure that timber operations do not threaten to cause significant adverse site-specific and cumulative impacts to the beneficial uses of water, native aquatic and riparian-associated species, and the beneficial functions of riparian zones ~~are protected from potentially significant adverse site-specific and cumulative impacts associated with timber operations~~, or threaten to cause violation of any applicable legal requirements.⁸

This article also provides protection measures for application in watersheds with threatened and endangered anadromous salmonids and an evaluation framework for application in watersheds listed as water quality limited under Section 303(d) of the Federal Clean Water Act.⁹

It is the intent of the Board to restore, enhance, and maintain the productivity of timberlands while providing ~~equal~~ appropriate levels of consideration for the quality and beneficial uses of water relative to timber production.¹⁰

⁸ **916** Issue: Consistency with water board legal requirements

1. Porter-Cologne subjects discharges that COULD (not will or would) affect the State's waters to Water Board regulation (CWC 13260(a)(1)).

2. It directs other State agencies to comply with State Water Board-approved water quality control plans (CWC 13247).

3. It also directs other State agencies to comply with State Water Board-adopted water quality control Policies (CWC 13146), including:

1) Resolution no. 88-63: Sources of Drinking Water Policy and

2) Resolution no. 68-16: Policy With Respect to Maintaining High Quality of Waters in California.

4. The latter Policy must be applied in a manner consistent with the federal antidegradation policy (40 CFR 131.12) under the Clean Water Act.

5. The additions at the end of the paragraph are needed because only a Water Board can determine, after making specified findings, that any degradation of water quality is acceptable. CalFire is not authorized to do this, even if CalFire believes the impact is not "significant" under CEQA.

6. The Water Board standards of review and environmental goals under the antidegradation policies and CWA 303(d) are more rigorous and less flexible than CEQA's "no significant avoidable impact" standard.

⁹ **916**

Issue: Clarity o specific purposes of this section. Language is added to clarify that the intent of this section is to address requirements for TES listed species and 303(d) listed water bodies.

¹⁰ **916 Issue:** Consistency with water board, laws and policies. Issue: Compliance with the State and federal antidegradation policies for waterbodies not impaired.1. This intent section is not intended to deal only with waters that are not 303(d)-listed, but to provide broad statewide guidance for all situations (including those with impairment).2. Amendment supports proposed amendments made to section 916 (c) below.

1 Further, it is the intent of the Board to clarify and assign responsibility for recognition of
2 potential and existing impacts of timber operations on watercourses and lakes, native aquatic
3 and riparian-associated species, and the beneficial functions of riparian zones and to ensure
4 ~~adoption~~ all harvesting plans ¹¹ of feasible measures to effectively achieve compliance with this
5 article. Further, it is the intent of the Board that the evaluations that are made, and the
6 measures that are taken or prescribed, be documented in a manner that clearly and accurately
7 represents those existing conditions and those measures. "Evaluations made" pertain to the
8 assessment of the conditions of the physical form, water quality, and biological characteristics of
9 watercourses and lakes, including cumulative impacts affecting the beneficial uses of water on
10 both the area of planned logging operations and in the Watershed Assessment Area (WAA).
11 "Measures taken" pertain to the procedures used or prescribed for the restoration,
12 enhancement, and maintenance of the beneficial uses of water.

11 916 Issue: Clarity of meaning of "adoption"

Issue: Consistency with the purposes of the CESA.

The phrase "adoption of" is unclear regarding the means by which the Board intends to achieve the objectives described. The proposed change clarifies that harvesting plans must comply with the stated objectives.

1 All provisions of this article shall be applied in a manner, which complies with the following:

2 (a) During and following timber operations, ~~the beneficial uses of water,~~ native aquatic
3 and riparian-associated species, and the beneficial functions of riparian zones shall be
4 maintained where they are in good condition, and protected where they are threatened, ~~and~~
5 ~~insofar as feasible, native aquatic and riparian-associated species shall be restored where~~
6 ~~they are impaired. [Optional Amendment 2:] Where beneficial uses of water are impaired,~~
7 ~~timber operations shall actively contribute toward their restoration.~~¹² [Optional Amendment
8 3:]¹³ Plan submitters are encouraged, but not required, to undertake additional measures
9 which could be undertaken at the plan submitters' option to further restore and enhance
10 beneficial uses of water which are impaired.

11
12
13
14
15
16
17
18 ¹² 916 (a) Issue: Clarification of differing restoration requirements for beneficial uses of
water.

19 1. Timber operations are generally accountable for actively contributing toward restoration, not
20 to achieving it all by themselves.

21 2. This requirement is not limited to what might be "feasible" according to 895.1

22 This amendment to include the term "restoration" is "optional". The Board's decisions to include
it or exclude it is dependant on 1) legal opinion of Board authorities for including
23 "restoration" in the FPRs and 2) a Board policy decision on extent to which they want to include
restoration as a goal of the FPRS.

24 ¹³ This amendment is "optional" and dependant on legal opinion on BOF authorities for including
"restoration" in the FPRs. The amendment modifies the requirement to "actively restore"
25 beneficial uses to optional restoration consistent with FPR rule language used in section 913.10
(d).

1 (b) ~~Maintenance, p~~Protection, **[Optional Amendment 4:]**¹⁴ and restoration of the quality and
2 beneficial uses of water during the planning, review, and conduct of timber operations shall
3 comply with all applicable legal requirements including those set forth in any applicable water
4 quality control plan or water quality control Policy adopted or approved by the State Water
5 Resources Control Board, as these are typically interpreted and applied by the affected regional
6 water quality control board.¹⁵

7 At a minimum, the LTO shall not do either of the following during timber operations:-

8 ~~(1) Place, discharge, or dispose of or deposit in such a manner as to permit to pass into~~
9 ~~the waters of the state, any substances or materials, including, but not limited to, soil, silt, bark,~~
10 ~~slash, sawdust, or petroleum, in quantities deleterious to fish, wildlife, beneficial functions of~~
11 ~~riparian zones, or the quality and beneficial uses of water;~~

12 ~~(2) Remove water, trees or large woody debris from a watercourse or lake, the adjacent~~
13 ~~riparian area, or the adjacent flood plain in quantities deleterious to fish, wildlife, beneficial~~
14 ~~functions of riparian zones, or the quality and beneficial uses of water.~~¹⁶

19 ¹⁴ The amendment to include the term "restoration" is "optional". The Board's decisions to
20 include it or exclude it is dependant on 1) legal opinion of Board authorities for including
"restoration" in the FPRs and 2) a Board policy decision on extent to which they want to include
restoration as a goal of the FPRS.

21 ¹⁵ 916 (b)

22 Issue: Consistency with water board, laws and policies.

23 1. Terms added are consistent with water board, laws and policies that require State agencies to
comply with State Water Board-adopted water quality control Policies (CWC 13146).

24 2. The last addition precludes "creative" interpretations of Water Board requirements by other
parties.

25 ¹⁶ 916 (b) (1) and (2)

Issue: Redundancy with 916.3 and 916.92. Existing subsection 916 (b) (1) is redundant with 916.3
and should be deleted. Section 916 (b) (2) is redundant to requirements in 916.9 (a)

1 **[Optional Amendment 5]** ¹⁷(c) Protecting and restoring native aquatic and riparian-associated
2 species, and the beneficial functions of riparian zones and the quality and beneficial uses of
3 water shall be given equal consideration as a management objective within any prescribed
4 WLPZ and within any ELZ or EEZ designated for watercourse or lake protection and any other
5 location where operations may affect riparian zones or the quality and beneficial uses of
6 water.¹⁸ **[Optional Amendment 6]** ¹⁹Where the quality and beneficial uses of water are
7 currently in good condition, maintaining that condition shall be given equal consideration as a
8 management objective relative to timber production. Where any beneficial use of water is
9 currently is threatened or exceptionally valuable, protecting its current condition shall be given
10 equal or greater consideration as a management objective. Where any beneficial use of water
11 is currently impaired, its restoration shall be given greater consideration as a management
12 objective than timber production, and timber operations shall be conducted in a manner that
13 actively contributes to its recovery.

17 ¹⁷ 916 (c) These amendments are "optional" and could be deleted in its entirety. The section is
redundant to other portions of section 916.

18 ¹⁸ **916(c)** Issue: Additional consideration for protection measures needed for areas outside of
19 riparian zones that may adversely impact riparian zones.
20 1. Operations on areas outside of WLPZ, ELZ, or EEZ may have substantial effects on aquatic and
21 riparian habitat, such as through contribution to slope failures. Plans should give equal
22 consideration to aquatic and riparian habitats regardless of the location of operations.

23 ¹⁹ **916 (c)** Issue: Consistency with water board, laws and policies.
24 1. The first sentence leads toward compliance with the State and federal antidegradation
25 policies.
2. The second sentence leads toward compliance with water quality standards and sets forth a
policy reflecting the "first protect the best" (or most critical) habitat (e.g., thermal refugia)
as well as USEPA-designated Outstanding National Resource Waters. 3. The third sentence leads
toward compliance with CWA 303(d) restoration objectives.

The amendment to include the term "restoration" is "optional". The Board's decisions to include
it or exclude it is dependant on 1) legal opinion of Board authorities for including restoration"
in the FPRs and 2) a Board policy decision on extent to which they want to include restoration as
a goal of the FPRS.

1 **(d)** The measures set forth in this Section are meant to enforce the public's historical and legal
2 interest in protection for wildlife, fish, and water quality and are to be used to guide timberland
3 owners in meeting their legal responsibilities to protect public trust resources.
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

1 **916.1, 936.1, 956.1 In Lieu Practices [All Districts]**

2 In rule sections where provision is made for site specific practices to be proposed by the RPF,
3 approved by the Director and included in the THP in lieu of a stated rule, the RPF shall
4 reference the standard rule, shall explain and describe each proposed practice, how it differs
5 from the standard practice, and the specific locations where it shall be applied; and shall explain
6 and justify how the protection provided by the proposed practice is at least equal to the
7 protection provided by standard rule.

8 **(a)** The in lieu practice(s) must provide for the maintenance, protection **[Optional**

9 **Amendment 7]**²⁰ and restoration of the beneficial uses of water, native aquatic and riparian-
10 associated species, and the beneficial functions of riparian zones²¹ in accordance with 14 CCR
11 916 above, or to the standards of 14 CCR 916.3 [936.3, 956.3] and 916.4(b) [936.4(b),
12 956.4(b)], whichever is greater.²²

13
14
15 ²⁰ The amendment to include the term "restoration" is "optional". The Board's decisions to
16 include it or exclude it is dependant on 1) legal opinion of Board authorities for including
17 "restoration" in the FPRs and 2) a Board policy decision on extent to which they want to include
18 restoration as a goal of the FPRS.

19 ²¹ **916.1 and 916.1 (d)** Issue: In-lieu practices often do not achieve the full intent of the FPR
20 to restore, enhance, and maintain aquatic and riparian habitat. 1. While not identified as a
21 component of the Group #1 rules, the language of this section strongly affects the implementation
22 of the regulations. In practice, proposed in-lieu practices often do not achieve the full intent
23 of the FPR to restore, enhance, and maintain aquatic and riparian habitat. The requirement to
24 provide protection at least equal to the standard rule is often only considered with respect to
25 pre-identified erosion control effects. This section is modified to explicitly require protection
of all aquatic and riparian habitat functions. Also, section (d) is added to require adherence
to the standard rule when one or more reviewing agency recommends against the proposed in-lieu
practice.

26 ²² **916.1 (a)** Changes in 916.1 (a) needed for consistency with amendments in 916. Issue:
justification for nonstandard practices: Consider amendments for two different levels of
explanation and justification for nonstandard practices:
27 1. A minimal level for those nonstandard practices which will actually provide better protection
28 (or better comply with applicable legal requirements) than the standard practice.
29 2. A more rigorous level for those that are less protective or arguably could cause violation of
30 applicable legal requirements. Having two differing levels of justification would provide common
sense timber harvest plan preparation requirements, relieving plan preparers of unnecessary
justifications when better than minimum standards are achieved by the non-standard practice.

1 **(b)** In lieu practices stated in an approved THP shall have the same enforceability and legal
2 authority as those practices required by the standard rules.

3 **(c)** Any in lieu practices which propose less than standard rule WLPZ widths for Class I
4 watercourses shall include 14 CCR 916.5.(e) [936.5(e), 956.5(e)] "A" & "D" protection
5 measures.

6 **(d) [Optional Amendment 7]²³** If one or more review agencies recommend against the
7 proposed in-lieu practice and provide substantial evidence supporting the recommendation, the
8 standard rule shall apply and the proposed in-lieu practice shall not be approved.

23 **916.1 (c)** This is an optional amendment for Board policy decision. The amendment is intended
25 to address recognized disagreements over decisions on inclusion of in-lieu practices during THP
reviews. A decision for inclusion or exclusion should also consider effects on maintaining CAL
Fire's authority as the lead agency for the project.

916.2, 936.2, 956.2 Protection of the Beneficial Uses of Water and Riparian Functions [All Districts]

(a) The measures used to protect each watercourse and lake in a logging area shall be determined by the presence and condition of the following values:

(1) The existing and restorable quality and beneficial uses of water as specified by the applicable water quality control plan and as further identified and refined during preparation and review of the plan.

(2) The existing and²⁴ restorable uses of water for fisheries as identified by the DFG or as further identified and refined during preparation and review of the plan.

(3) ~~Riparian habitat~~ The beneficial functions of the riparian zone that provides for the biological needs of native aquatic and riparian-associated species as specified in 14 CCR 916.4(b) [936.4(b), 956.4(b)] and 14CCR 916.9 [936.9, 956.9] when the plan is in a planning watershed with threatened or endangered anadromous salmonids.²⁵

²⁴ **916.2 (a) (2)** Issue: Consistency of terminology

1. Term "existing and restorable" (or potential) are used for consistency and to ensure all existing or potential uses, such as future suitable habitat for listed anadromous species, be protected.

²⁵ **916.2 (3)**

Issue: Consistency of terminology

1. Term "beneficial functions of riparian zones" is defined in the FPRs repalces undefined terms such as "riparian habitat". Term "beneficial functions of riparian zones" being amended into other sections for same consistency purpose.

2. If the values of the beneficial functions of riparian zone are different between T/I and non-T/I areas and adding reference to 916.9 provides additional specificity for which beneficial functions need to be protected. However staff questions whether there's any difference in the beneficial functions of a riparian zone (as stated in 916.4 (b)) in a T/I watershed or a non-T/I watershed.

1 **(4)** Sensitive conditions near watercourses and lakes as specified in 14 CCR 916.4(a)
2 [936.4(a), 956.4(a)].

3 The maintenance, protection, and**[Optional Amendment 8]**²⁶ restoration of Tthese values
4 shall be ~~protected from potentially significant adverse impacts from timber operations and~~
5 ~~restored to good condition, where needed, achieved~~ through a combination of the rules and
6 plan-specific mitigation. The RPF shall propose, and the Director may require, adequate
7 protection of overflow and changeable channels which are not contained within the channel
8 zone.²⁷

21 ²⁶ **916.2** (a)(4) This is an optional amendment for Board policy decision. The amendment is
22 intended to address recognized disagreements over decisions on inclusion of in-lieu practices
during THP reviews. A decision for inclusion or exclusion should also consider effects on
maintaining CAL Fire's authority as the lead agency for the project

23 ²⁷ **916.2** Issue: Consistency with water board, laws and policies.

24 The "maintenance", and "restoration" terms are added pursuant to the Water Board standards of
review and environmental goals under the antidegradation policies and CWA 303(d). These are more
25 rigorous and less flexible than CEQA's "no significant avoidable impact" standard.

(b) The State's waters are grouped into four classes based on key beneficial uses. These classifications shall be used to determine the appropriate ~~minimum~~ protection measures to be applied during the conduct of timber operations. The basis for classification (characteristics and key beneficial uses) are set forth in 14 CCR 916.5 [936.5, 956.5], Table 1 and the range of ~~minimum~~ appropriate²⁸ protective measures applicable to each class are contained in 14 CCR 916.3 [936.3, 956.3], 916.4 [936.4, 956.4], and 916.5 [936.5, 956.5].and 916.9 [936.9, 956.9] when the plan is in a planning watershed with threatened or endangered anadromous salmonids.²⁹

²⁸ **916.2 (b) and (c)** Issue: Clarity of term "appropriate minimum".1. Use of the term "appropriate minimum" is a confusing double descriptor. "Appropriate" is all that is needed to allow review of the proposed mitigations. By eliminating term "minimum", standards are only defined as appropriate, and can be more or less in the standards stated FPRs.

²⁹ **916.2 (b) and (c)** Issue: Consistency of application of T/I rules. Reference to 916.9 adds the T&E fish rules to the list of appropriate protection measures.

1 (c) When the protective measures contained in 14 CCR 916.5 [936.5, 956.5] and 916.9
2 [936.9, 956.9] when the plan is in a planning watershed with threatened or endangered
3 anadromous salmonids or pursuant to 14 CCR 916.12, are not adequate to provide for
4 maintenance, protection **[Optional Amendment 9]³⁰**, or restoration ~~to~~ of beneficial uses,
5 ~~feasible~~ such measures as are necessary and sufficient to achieve these goals shall be
6 developed by the RPF or proposed by the Director under the provisions of 14 CCR 916.6
7 [936.6, 956.6], Alternative Watercourse and Lake Protection, and incorporated in the plan when
8 approved by the Director .³¹

18 ³⁰ **916.2** (c) This is an optional amendment for Board policy decision. The amendment is intended
19 to address recognized disagreements over decisions on inclusion of in-lieu practices during THP
20 reviews. A decision for inclusion or exclusion should also consider effects on maintaining CAL
21 Fire's authority as the lead agency for the project

21 ³¹ **916.2** (c)

22 Issue: Removal of "feasibility"

23 Issue: Consistency with 916 amendments

24 Issue: Justification for nonstandard practices providing greater protection.

25 Under Water Board standards of review, the appropriate measures are those which are necessary and
sufficient to achieve the desired goal, not just those that are "feasible".

916.9, 936.9, 956.9 Protection and Restoration of the Beneficial Functions of the Riparian
Zone in Planning Watersheds with Threatened or ~~Impaired Values~~ Endangered
Anadromous Salmonids[All Districts]

In addition to all other district Forest Practice Rules, the following requirements shall apply in
any ~~p~~Planning ~~w~~Watershed with ~~t~~Threatened or ~~impaired values~~Endangered Anadromous
Salmonids:³²

³² 916.9

Issue: Clarity of which beneficial uses are intended to be protected.

1. New title and preamble clarifies that the focus of this section are goals and regulations for watersheds with threatened or endangered anadromous salmonids, disconnecting section from rules and regulations to meet requirements for 303D listed impaired watersheds.

2. Term "beneficial function of riparian zone" is added as this is a defined term in the FPRs and provides uniformity for board's intention on which beneficial uses are to be protected

(a) GOAL - Every timber operation shall be planned and conducted to prevent ~~deleterious~~
~~interferencesignificant impacts to with the watershed conditions that primiliarly limit the values~~
~~set forth in 14 CCR 916.2 [936.2, 956.2](a)~~ the primary limiting factor that affect threatened or
endangered anadromous salmonid species in the planning watershed-(e.g., sediment load
increase where sediment is a primary limiting factor; thermal load increase where water
temperature is a primary limiting factor; loss of instream large woody debris or recruitment
potential where lack of this value is a primary limiting factor; substantial increase in peak flows
or large flood frequency where peak flows or large flood frequency are primary limiting factors).
To achieve this goal, every timber operation shall be planned and conducted to meet the
following objectives where they affect a primary limiting factor:³³

³³ **916.9 (a)**

Issue: Consistence with CEQA.

Issue: Clarity and specificity on which values are intended to be protected

1. For consistence with CEQA, the term "deleterious interference" is a deleted.

2. For clarity with the language used in the other goals in this section, the reference to values in 916.2 is deleted. The values in 916.2 are not necessarily related to fisheries. This section should be clear about the strategy for protecting listed fish.

3 A definition for "primary limiting factor" will be needed with the additional of the term being proposed.

1 (1) Comply with the terms of a Total Maximum Daily Load (TMDL) that has been
2 adopted to address primary limiting factors that may be affected by timber operations. ~~if a TMDL~~
3 ~~has been adopted,, or not result in any measurable sediment load increase to a watercourse or~~
4 ~~lake.~~³⁴

5 (2) Not result in any significant sediment load increase to a watercourse system or
6 lake³⁵.

13 ³⁴ 916.9 (a)(1)

14 Issue: Consistency of intent language.

15 Issue: Eliminate unnecessary/redundant language.

16 Issue: Clarity of goals

17 1.This maintains the consistency of using "limiting factors" as the focus of enhanced fisheries
18 protections. It also implies a restoration goal.

19 2. The first goal should be split since not all TMDLs address sediment

20 ³⁵ 916.9 (a)(2)

21 Issue: Clarity of objectives

22 Issue: Consistence with CEQA; measurability of changes to limiting factors

23 1. A separate objective is created from objective number one above since not all TMDLs address
24 sediment.

25 2. For consistency with CEQA standards, term "measurable" is deleted because with today's
instrumentation measurable sediment increases is not realistic.

1 ~~(2)~~(3) Not result in any ~~measurable~~ significant decrease in the stability of a watercourse channel
2 or of a watercourse or lake bank.

3 ~~(3)~~(4) Not result in any ~~measurable~~ significant blockage of any aquatic migratory routes for
4 anadromous salmonids or listed species.

5 ~~(4)~~(5) Not result in any ~~measurable~~ significant streamflow reductions during critical low water
6 periods except as part of an approved water drafting plan pursuant to 14 CCR 916.9(r) [936.9(r),
7 956.9(r)].

8 ~~(5)~~(6) Consistent with the requirements of 14 CCR § 916.9(i), 14 CCR § 936.9(i), or 14 CCR §
9 956.9(i); protect, maintain, and restore trees (especially conifers), snags, or downed large
10 woody debris that currently, or may in the foreseeable future, provide large woody debris
11 recruitment needed for instream habitat structure and fluvial geomorphic functions³⁶.

22 ³⁶ 916.9 (a)(3)-(5)

23 Issue: Consistence with CEQA; measurability of changes to limiting factors

24 For consistency with CEQA standards, term "measurable" is deleted because with today's
25 instrumentation measurable bank stability, migratory route blockage, and streamlflow reduction is
not realistic.

1 ~~(6)(7)~~ Consistent with the requirements of 14 CCR § 916.9(g), 14 CCR § 936.9(g), or 14 CCR §
2 956.9(g); protect, maintain, and restore the quality and quantity of vegetative canopy needed to:
3 (A) provide shade to the watercourse or lake to maintain daily and seasonal water
4 temperatures within the preferred range for anadromous salmonids or listed species where they
5 are present or could be restored, (B) minimize daily and seasonal temperature
6 fluctuations provide a deciduous vegetation component to the riparian zone for aquatic nutrient
7 inputs (C) maintain daily and seasonal water temperatures within the preferred range for
8 anadromous salmonids or listed species where they are present or could be restored, and (D)
9 provide hiding cover and a food base where needed.³⁷

³⁷ 916.9 (a)(6)

Issue: Eliminate redundant objectives

Issues: Refine "shade" Refine "nutrient" objectives based on TAC science findings.

1. This addition of temperature controls specific to anadromous salmonids sets a very specific standard for protection or restoration of the vegetative canopy. This only applies to class I per the reference to 916.9(g)

2. The purpose of providing shade in the goal is made specific for supporting anadromous salmonid. This modification is consistent with previous amended goal statement in 916.9 for focusing the T/I rule on listed anadromous species. By combining the proposed language item 6 (B) and (C) becomes redundant and are deleted.

3. Existing language for item 6 (C) is a narrow description of vegetative canopy goals. This goal should be discussed in the context of the primer section on nutrients and his proposed in this change to broaden the goal of providing shade.

1 ~~(7)~~(8) Result in no substantial significant increases in peak flows or large flood frequency.³⁸

2 (b) Pre-plan adverse cumulative watershed effects on the populations and habitat of
3 anadromous salmonids shall be considered. The plan shall specifically acknowledge or refute
4 that such effects exist. ~~Where appropriate~~When the proposed timber operations will
5 significantly effect existing cumulative watershed effects, the plan shall set forth measures to
6 effectively reduce such effects.³⁹

18
19 ³⁸ 916.9 (a)(7)

20 Issue: Consistence with CEQA; Clarity of term "substantial" for changes to limiting factors
21 For consistency with CEQA standards, term "substantial" is deleted.

22
23 ³⁹ 916.9 (b)

24 Issue: Consistence with CEQA; Clarity of term "Clarity of term "appropriate"
25 For consistency with CEQA standards, term "appropriate" is deleted.

1 **916.12 ~~Section 303(d) Listed Watersheds~~ Restoration in Watersheds with Impaired**
2 **Beneficial Uses of Water [All Districts]**

3 For any planning watershed in which timber operations could contribute to the pollutants
4 or stressors which have been identified as limiting water quality in a water body listed pursuant
5 to 303(d) Federal Clean Water Act, the following shall apply: The provisions of this section are
6 intended to achieve consistency with the goals of federal Clean Water Act Section 303(d) and
7 associated federal regulations, as well as with water quality control plans and water quality
8 control policies adopted or approved by the State Water Resources Control Board to implement
9 those federal requirements. In addition to all other district Forest Practice Rules, the following
10 goals and objectives shall apply in any planning watershed in which timber operations can
11 generate discharges that can exacerbate the effect of stressors or pollutants to downstream
12 beneficial uses of water which are already listed as impaired pursuant to Clean Water Act
13 Section 303(d).⁴⁰

14
15
16
17
18 ⁴⁰ 916.12

19 Issue: Consistency with water board requirements implementing Clean Water Act Section 303(d).

20 1. The entirety of 916.12, as amended, is to improve consistency with State and federal goals
21 and requirements for restoration of the quality and beneficial uses of water in water bodies that
22 are (or may be) listed pursuant to Clean Water Act Section 303(d). These goals and requirements
23 are set forth in:

24 a) Federal Clean Water Act Section 303(d) and associated U.S. Environmental Protection Agency
25 regulations (40 CFR 130.7).

b) Any applicable Total Maximum Daily Load (TMDL) developed for a 303(d)-listed water body by
either the U.S. Environmental Protection Agency or a regional water quality control board.

c) Any TMDL implementation plan set forth in an applicable water quality control plan approved or
adopted by the State Water Resources Control Board. Water quality control plan provisions are
binding on all State agencies and potential dischargers.

d) The following State Water Board-adopted water quality control policies which are binding on
activities of all State agencies and potential dischargers: (To be listed)

1 **(a) GOAL** - Every timber operation shall be planned and conducted to actively contribute
2 toward restoration of beneficial uses of water**[Optional Amendment 10]** in a planning
3 watershed [which has been listed as impaired pursuant to Clean Water Act Section 303(d)]
4 **[Optional Amendment 11]** [which has been listed pursuant to Section 303(d) of the federal
5 Clean Water Act, but for which a Total Maximum Daily Load (TMDL) implementation plan has
6 not yet been adopted] **[Optional Amendment 12]** [with a TMDL implementation plan that has
7 been adopted by the responsible regional water quality control board] when impairments could
8 be exacerbated by discharges from timber operations. **[Optional Amendment 13]** [when
9 impairments can be significantly affected by timber operations.

(b) Implementation - To achieve this goal, every timber operation shall be planned and conducted to:

(1) Comply with the terms of a TMDL implementation plan that has been adopted by the responsible regional water quality control board and addresses stressors or pollutants whose effects may be exacerbated discharges from timber operations.⁴¹.

(2) For 303(d)-listed waters without a TMDL implementation plan, comply with any management plan for one or more planning watersheds that has been collaboratively developed by the board, department, and the responsible regional water quality control board. The management plan shall include the following:⁴².

⁴¹ 916.12(b)(1)

Issue: Compliance with existing TMDL implementation plans

This is the current legal standard required by water boards. This requirement is also mentioned in 916.9(a)(1). Board should consider deleting 916.9 (a)(1) if this section is adopted.

⁴² 916.12(b)(2)

Issue: Proactive protection and restoration.

1. New 916.12(b)(2) allows a watershed management plan that is collaboratively developed by the board, department, and the responsible regional water board to reduce the burden of subsequent Water Board actions. It includes two approaches that can get an early start on correcting water quality problems.

2. It could incorporate monitoring to validate the effectiveness of the plan with respect to beneficial uses of water, as well as adaptive management to make any needed corrections.

3. It would be developed and implemented under the purview of BOF and Cal Fire, and they are consistent with the BOF intent to "enhance" beneficial uses of water (916). Either would be more appropriately tailored at a watershed scale rather than a regional "one-size-fits-all" scale.

4. This approaches are likely to entail less stringent requirements than would be needed if the problem is allowed to grow worse and must be subsequently addressed by a regional water quality control board.

5. If this proactive approaches is not taken, timber operations must comply with the requirements of a TMDL implementation plan that is developed and implemented by the responsible regional water quality control board as required 916.12(b)(1)

1 **(A)** ~~The Department shall, in collaboration with~~ and the appropriate RWQCB ~~and~~
2 ~~SWRCB, shall collaboratively~~ prioritize watersheds in which the following will be done: 1)
3 conduct or participate in an assessment or analysis of the watershed that may be needed, 2)
4 ~~participate in the development of Total Maximum Daily Load (TMDL) problem assessment,~~
5 ~~source assessment, or load allocations related to timber operations, and 3)~~ if existing rules are
6 deemed not to be sufficient, develop recommendations for watershed-specific ~~silvicultural~~
7 ~~implementation~~ forest practices and for enforcement, and monitoring and adaptive management
8 practices to be applied by the Department and RWQCB.

9 **(bB)** The Department and the appropriate RWQCB shall collaboratively prepare a
10 report setting forth ~~the Department's~~ a jointly-proposed watershed management plan
11 incorporating the findings and recommendations from the activities identified pursuant to (a1)
12 above. The report shall be jointly submitted to the Board and the appropriate RWQCB. The
13 report shall be made available to the public upon request and placed on the Boards' website for
14 a 90-day period.

15 **(cC)** The Board and the appropriate RWQCB shall jointly consider approving or
16 adopting the proposed watershed management plan. If the two boards jointly approve or adopt
17 the watershed management plan, and it includes ~~Where the Department has recommended that~~
18 ~~the adoption of~~ provisions for watershed specific forest practices ~~rules is needed,~~ the Board
19 shall consider ~~that recommendation~~ the watershed management plan as a proposal for
20 rulemaking under the Administrative Procedures Act (Section 11340 et. seq. Gov Code) and
21 shall begin that process within 180 days following ~~receipt of that report~~ adoption or approval of
22 the plan.

23 **(dD)** ~~These~~ watershed management plan, including its specific rules shall be
24 developed in collaboration with ~~the appropriate RWQCB,~~ the landowner(s) or designee with land
25

1 in the planning watershed(s), and other persons or groups within the watershed, and may also
2 be incorporated into a TMDL implementation plan.

3 **(eE)** The watershed ~~specific rules~~ management plan shall remain in effect until
4 the water body has been removed from the 303(d) list, or that the Board finds, after consulting
5 with the appropriate RWQCB, that timber operations are no longer a significant source of the
6 pollutant or stressor that limits water quality in the listed water body.⁴³

7 **(F)** Include in the management plan the goal of restoring impaired beneficial uses
8 of water and degraded beneficial functions of riparian zones higher consideration than the goal
9 of maximizing timber production, especially in any WLPZ or in any EEZ or ELZ designated for
10 protection of the quality and beneficial uses of water.⁴⁴

11
12
13 ⁴³ **916.12(b)(2)(A -E)** Issue: Proactive process to restore already-impaired beneficial uses.

14 This new subsection is essentially an amendment of existing 916.12. A watershed management plan
15 such as anticipated here can be deemed to be a component (or satisfy the requirements) of the
16 subsequent TMDL implementation plan that will be incorporated into the applicable water quality
17 control plan.

18 ⁴⁴ **916.12(b)(3)**

19 Issue: Balancing mandates for water quality and timber production

20 1. This requirement balances the respective resource mandates of Water Boards and BOF in a
21 manner consistent with applicable legal requirements. The Water Board mandates, goals and
22 requirements for beneficial use restoration supersede those of the Forest Practice Act and Rules
because: i) they are imposed by the federal Clean Water Act and associated federal regulations
which supersede any State requirements, and ii) they are set forth, in part, in water quality
control policies and water quality control plans, both of which are binding on State agencies and
potential dischargers.

23 2. The "beneficial functions of riparian zones", WLPZs, EEZs, and ELZs are given special
24 attention because: i) they are immediately adjacent to water bodies, ii) their functions are
critical to and intimately interrelated with water body conditions, so that iii) disturbance
within those zones can directly impact beneficial uses of water. However, the focus is not
exclusively on these zones because timber operations (especially roads and landings) in other
areas (especially sensitive sediment sources) can cause discharges which these zones cannot fully
mitigate.

1 (4) Comply with the following prescriptive requirements (to be developed)⁴⁵

2 (A) Requirements for sediment-limited waters (reference to appropriate provisions of
3 916.9, plus appropriate additional provisions)

4 (B) Requirements for temperature-limited waters (Reference to appropriate
5 provisions of 916.9, plus appropriate additional provisions)

24 ⁴⁵ **916.12 (b)(4)** This section represents potential prescriptive standards that have been or will
25 be submitted by State or Regional Water Quality Control Boards which are necessary to meet
requirements for 303(d) listed waterbodies. They would be applicable to 303(d)-listed waters
without a TMDL implementation plan when no proactive approach are established pursuant to 916.12
(b)1).

(c) [OPTIONAL AMENDMENT14] Addressing Cumulative Effects on Already-Impaired Beneficial Uses⁴⁶

(1) When assessing site specific or cumulative impacts of proposed timber operations on 303(d)-listed water bodies, the RPF shall:⁴⁷

(A) Assess current watershed condition and sensitivity, the existing stressors or pollutants from past natural events, the existing and foreseeable stressors and pollutants from rates of anthropogenic watershed disturbance, and the degree to which discharges from the proposed operations may interact with such stressors or pollutants to further impair a waterbody's beneficial uses:⁴⁸

(B) Assume that, absent additional or enhanced measures, discharges from the proposed timber operations will contribute to existing and future cumulative effects unless there is clear evidence to the contrary.⁴⁹

⁴⁶ 916.12(c)

Issue: Addressing cumulative impacts from existing stressors and pollutants

New 916.12(c) has been modified from existing 898. CEQA concepts and language have been replaced with more appropriate water quality concepts and language (e.g., attainment of water quality standards) because CEQA standards of review are superseded by water quality standards of review in this situation. The FPC has indicated that it wishes to modify this proposal to limit Cumulative impact assessment to specific "Planning Watersheds" within the entire 303 (d) waterbody.

⁴⁷ New subsection 916.12(c)(1) reduces the burden on a plan preparer by allowing an RPF to not re-address cumulative effect issues in a THP to the degree that they have been already been resolved through a watershed management plan developed pursuant to 916.12(b)(1).

⁴⁸ New subsection 916.12(c)(1)(A) requires assessment of the effects of past natural events on current water body condition, not just effects of past projects per CEQA. It also requires assessment of existing and foreseeable cumulative effects due to anthropogenic watershed disturbance. It places no artificial limitations on how far upstream or downstream a cumulative effects analysis or related measures should extend.

⁴⁹ Consistent with CEQA, new subsection 916.12(c)(1)(B) precludes the assumption that typical measures will prevent, or not contribute to, cumulative effects. It also embodies the position that 303(d)-listed water bodies already suffer from cumulative effects and so, absent evidence to the contrary, are likely to need additional or enhanced measures to attain water quality standards.

1 **(C) Propose additional or enhanced measures that are necessary and sufficient to**
2 **actively contribute both to improvement of the beneficial uses of water and to attainment of**
3 **water quality standards in the listed portion of the waterbody. Plan submitters are encouraged,**
4 **but not required, to undertake the additional measures to restore and enhanced the beneficial**
5 **use the water. CAL FIRE may advise plans submitters on measures which could be undertaken**
6 **at the plan submitters optiond to further restore an enhanced the beneficial uses of water** ⁵⁰
7 **Both the assessment and the proposed measures may be based on the assessment and**
8 **measures in a watershed management plan prepared in accordance with 916.12(b) (1). To the**
9 **degree that cumulative effect issues are satisfactorily addressed by such watershed**
10 **management plans, they need not be addressed again by the plan preparer.**

11 **(2) The Director's evaluation of such effects and restoration measures will be done in**
12 **consultation with the appropriate RWQCB.** ⁵¹

23 ⁵⁰ New subsection 916.12(c)(1)(C) replaces the requirement for measures that are only "feasible",
24 with measures that are "necessary and sufficient" to contribute to attainment of water quality
25 standards. It does not allow the recovery of impaired beneficial uses to be impeded. Note
language that that make implementation of restoration requirement optional (similar to section
913.10

⁵¹ Subsection 916.12(c)(2) repeats the provisions of existing 898 regarding the Director's review.

1 **(c) [OPTIONAL AMENDMENT15]⁵² Addressing Cumulative Effects on Already-**
2 **Impaired Beneficial Uses**

3 When assessing cumulative impacts of a proposed project on any portion of a waterbody
4 that is located within or downstream of the proposed timber operation and that is listed as water
5 quality limited under Section 303(d) of the Federal Clean Water Act, the RPF shall assess the
6 degree to which the proposed operations would result in impacts that may combine with existing
7 listed stressors to impair a waterbody's beneficial uses, thereby causing a significant adverse
8 effect on the environment. The plan preparer shall provide feasible mitigation measures to
9 reduce any such impacts from the plan to a level of insignificance, and may provide measures,
10 insofar as feasible, to help attain water quality standards in the listed portion of the waterbody.
11 The Director's evaluation of such impacts and mitigation measures will be done in consultation
12 with the appropriate RWQCB.
13 end

25 ⁵² Uses existing language found in section 898, with no additions or deletions. Would delete
portion of section 898 that is reinstated here.